

REMARKS

Applicants are submitting herewith a Request for Continued Examination.

In an earlier Office Action, dated February 14, 2003, the Examiner issued a final rejection of Claims 1-22, which are all of the pending claims, under 35 U.S.C. §103 as being unpatentable over the prior art. In particular, Claims 1-3, 7, 8, 10-13 and 17-20 were rejected as being unpatentable over U.S. Patent 5,767,842 (Korth) in view of U.S. Patent 6,407,679 (Evans, et al.). Claims 4-6, 9, 14-16, 21 and 22 were rejected as being unpatentable over Korth in view of Evans, et al. and further in view of U.S. Patent 6,421,453 (Kanevsky).

In response to that Office Action, Applicants submitted an Amendment under 37 C.F.R. §1.116, however that Amendment was not entered. Thus, Applicants are submitting a Request for Continued Examination.

This Preliminary Amendment is being file to amend independent Claims 1, 8, 10 and 17 to emphasize differences between the claims and the prior art. Also, this opportunity is being taken to rewrite Claims 4, 9, 14 and 21 in independent form including, respectively, the limitations of original Claims 1, 8, 10 and 17. Claim 16 is being amended to be dependent from Claim 14, rather than claim 10.

As discussed in Applicant's previous Amendment, the present invention relates to a method and system for typing using a virtual keyboard. In accordance with the invention, a person moves his or her fingers as if that person was typing, and computer processes translate that movement into text, as if the person were using a real keyboard. More specifically, these processes capture gesture images, classify each gesture into one of a plurality of classes based on the movement of the gesture, and associate each of these classes with one of the keys of the virtual keyboard.

In rejecting the claims over the prior art, the Examiner noted that Korth does not disclose classifying gestures into classes and associating each of those classes with one of the keys of the keyboard. The Examiner argued, however, that Evans, et al. teaches the use of a glove in a virtual environment, where groups of gestures are classified and movement of each finger of the glove may be associated with the keys of a virtual keyboard.

There is a very important difference between the classification procedure disclosed in Evans, et al. and the classification procedure used in the preferred embodiment of the present invention. In particular, with the Evans, et al. procedure, movement of a finger is always initially associated with the same value, while with the preferred embodiment of this invention, movement of the same finger may be initially associated with different values depending on the relative movement of the finger.

In the Evans, et al. procedure, each finger is associated with the one particular value, and a key sequence, such as "23944" is obtained by sensing the sequence of the finger movement. That sequence is then matched, using probability analysis, to a word in a dictionary. With the present invention, different movements of even the same finger may be associated with different values, such as "c," "d," or "e."

The preferred procedure of the present invention is of utility for a number of reasons. First, with this procedure, it is not necessary to provide the dictionary used in Evans, et al. to match finger sequences with words. With the preferred embodiment of the present invention, the finger gestures themselves can be used to spell out words or to determine the most probable word from what is spelled out. Second, again because it is not necessary, with this invention, to match finger sequences with words in a given dictionary, the preferred procedure of

the present invention, as a practical matter, can be used with a substantially larger vocabulary than can the procedure of Evans, et al.

Applicants are herein amending Claims 1, 8, 10 and 17 to emphasize the above-discussed aspect of the invention. Specifically, each of these claims is being amended to indicate that the computer processes classify each gesture image into one of a plurality of classes depending on the movement of the gesture, and associate each of these classes with one of the keys of the virtual keyboard.

The other references of record have been reviewed, and they are believed to be no more pertinent than the above-discussed references. In particular, these other references also fail to disclose or suggest the principal of classifying gestures into one of a plurality of classes depending on the movement of the gesture, and associating each class with one of the keys of the keyboard.

Because of the above-discussed differences between Claims 1, 8, 10 and 17 and the prior art and because of the advantages associated with those differences, these claims patentably distinguish over the prior art and are allowable. Claims 2, 3 and 7 are dependent from, and are allowable with, Claim 1. Also, Claims 11-13 are dependent from, and are allowable with, Claim 10, and Claims 18-20 are dependent from Claim 17 and are allowable therewith.

In addition to the foregoing, the rejection of Claims 4-6, 9, 14-16, 21 and 22 under 35 U.S.C. §103 is respectfully traversed on the grounds that Kanevsky, et al. is not prior art as to the present application because Kanevsky, et al. and this application are assigned to the same corporation, IBM Corporation. Applicants submit that the filing of the present application on June 27, 2000, brings the subject application under the rubric of the amendments made to the

Patent Law in the American Inventors Protection Act of 1999. That Act, enacted November 29, 1999, amends 35 U.S.C. §103(c) such that subject matter developed by another person which qualifies as prior art under 35 U.S.C. §102(e) does not preclude patentability where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an application of assignment to the same person.

That this section applies to the instant application is established by the Guidelines concerning the implementation of changes to 35 U.S.C. §§102(g) and 103(c) published in the Official Gazette on April 11, 2000. Those Guidelines includes the statement that the amendment to 103(c) applies to all utility, design and plant patent applications filed on or after November 29, 1999, including continuing applications filed under 37 C.F.R. §1.53(d), continued prosecution applications filed under 37 C.F.R. §1.53(b) and reissues. In view of the filing of the present application on June 27, 2000, Applicants benefit from the statutory restraints imposed in the amendment to §103(c).

That the claims of the present application are patentable over the rejection of record is established by the fact that Kanevsky, et al. is, on its face, assigned to International Business Machines. The instant application is also assigned to International Business Machines. The Assignment of the instant application to International Business Machines by the Applicants of the present application was mailed June 27, 2000, to the USPTO for recording. The Assignment was recorded by the USPTO on June 27, 2000 at Reel 010917, Frame 0132.

U.S. Patent 6,421,453 to Kanevsky, et al. issued July 16, 2002. The present application is entitled to the benefit of the filing date of June 27, 2000. As such, the outstanding rejection of Claims 4-6, 9, 14-16, 21 and 22 of the present application applies the Kanevsky, et

al. patent predicated upon its availability as a reference under 35 U.S.C. §102(e) in that this is the only subsection of 35 U.S.C. §102 whose requirements are met by this patent.

In view of the requirements of 35 U.S.C. §103(c), as amended November 29, 1999, which apply to the instant application, the Kanevsky, et al. reference cannot preclude patentability under 35 U.S.C. §103, the section upon which Claims 4-6, 9, 14-16, 21 and 22 of the present application have been rejected. Thus, these claims of the present application are patentable over the outstanding rejection of record. Reconsideration and removal of this ground of rejection is therefore deemed appropriate. Such action is respectfully urged.

It is noted that Claims 4, 9, 14 and 21, as amended herein, are now independent Claims. Claims 5 and 6 are dependent from, and are allowable with Claim 4, Claims 15 and 16 are dependent from Claim 14 and are allowable therewith, and Claim 22 is dependent from, and is allowable with, Claim 21. It is thus believed that Claims 4-6, 9, 14-16, 21 and 22 are now allowable.

For the reasons advanced above, the Examiner is asked to reconsider and to withdraw the rejections of Claims 1-22 under 35 U.S.C. §103, and to allow these claims. If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

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